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Initial Findings Pilot Study of Student Progress Toward Graduation in a Sample of Six High Schools

Education Oversight Committee
December 13, 2004

Background for the Study

The Education Oversight Committee (EOC) has identified two critical actions to implement their objectives in 2004-2005: to increase the high school graduation rate and to increase the utilization and quality of the data used in the accountability system. Data previously examined by the EOC indicate that statewide student enrollments in South Carolina public high schools are highest in grade 9, but decline systematically with each succeeding grade level such that, for example, the grade 12 enrollment in the 2003-2004 school year represents only 57.9% of the grade 9 enrollment four years earlier (see Figure 1). Statewide data on students completing high school (receiving a State diploma or a State certificate of attendance) reflect this trend: high school completers in the Class of 2003 (the most recent year for which Statewide data are available) represent 53.4% of the 9th grade enrollment four years earlier (Figure 2). The low levels of completion among high school students revealed by these data raise questions such as:

- Are these data accurate: are students really leaving school at these rates?
- Do we have data available in the system on students who fail to complete high school which can be used to better understand how to help these students?
- How accessible are the data and do they have sufficient quality for use in improvement?

At the direction of the EOC, staff is conducting a pilot study in a sample of high schools designed to address these questions. EOC staff are being advised by members of the Data Quality Advisory Committee (see Appendix), composed of data specialists from school districts and the SDE. A study of the high school graduation rate and of the quality of the data used to compute it was given highest priority by the advisory committee and their assistance and consultation for the study has been ongoing and critically valuable.

Description of Study

Data on the yearly progress of two groups of high school students were collected from six SC high schools.

- Group 1: Data from students attending grade 9 in the 1999-2000 school year were collected covering up to a five year period (through Summer 2004) if the student remained enrolled in the school. These students were expected to graduate in Spring 2003.
- Group 2: Data from students attending grade 9 in the 2000-2001 school year were collected for a four year period. These students were expected to graduate in Spring 2004.

Data collected included demographic information, whether the student was repeating grade 9 in the initial year of the study, student success on the high school Exit

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Exam, student absences and achievement of Carnegie units each semester enrolled, and the reasons the students left the school (through graduation or for other reasons).

Characteristics of the sample of six high schools in which the study was conducted are listed in Table 1.

Table 1
Characteristics of the Six High Schools in Study
High School Study of Cohorts of 9th Grade Students from Sample High Schools
Longitudinal Study of 1999-2000 and 2000-2001 Cohorts

Variable	2002-2003 School Year				2003-2004 School Year		
	Mean	Minimum	Maximum		Mean	Minimum	Maximum
Poverty Level	46.3%	15.2%	75.4%		49.8%	19.1%	77.7%
Dropout Rate	2.8%	0.8%	5.9%		1.9%	0.0%	3.4%
Graduation Rate	82.4%	70.6%	94.3%		78.9%	68.2%	86.8%
Suspended or Expelled for Violent or Criminal Offenses	3.6%	0.8%	7.5%		3.4%	1.8%	5.3%
Disabilities Other Than Speech	15.8%	8.2%	20.9%		16.2%	9.1%	23.6%
Student Attendance	95.9%	95.1%	97.1%		96.9%	95.4%	99.9%
Enrollment	1161	740	1814		1204	767	1918

- In 2004, four of the high schools received Excellent absolute report card ratings, and two received Good ratings.
- Two schools were located in the Upstate, two in the Midlands, and two in Coastal South Carolina.
- Three schools are located in rural or small town communities, two are in suburban areas, and one is located in the inner city.

To examine the availability of the data and the accuracy of various data collection methods two of the high schools collected data directly from the archived paper copies of records in the schools; two schools collected data primarily from the electronic school databases (OSIRIS and SASIxp), and two schools used a combination of paper and electronic data sources.

Data were collected in July through November 2004 and provided to EOC staff in various formats (on paper data collection forms for keypunching or in ACCESS or SAS data files). Information revealing the identity of individual students was not provided to the EOC.

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Results – Data Quality

This study requires the retrospective reconstruction of data records up to five years ago from data systems which were not designed specifically to provide longitudinal data. However, schools were able to provide most of the information requested, but with varying degrees of completeness and accuracy. Comparing the enrollment counts for the two cohorts based on the 135-day Average Daily Membership (ADM) figures across all the sample schools with the numbers of students for whom data were provided revealed that 100.5% of the 135-day ADM count for the 1999-2000 cohort and 103.8% of the 135-day ADM count for the 2000-2001 cohort were provided. However, the results for individual schools ranged from a low of 74.7% to a high of 128.3%. Schools relying primarily on archival paper records tended to have somewhat lower percentages of students identified than schools obtaining records from their electronic databases.

The initial results from the data analysis are listed in Table 2, which outlines the outcomes for students who completed their high school educations at the study schools during the time period studied as well as the information available for students who discontinued attendance at the high schools studied before completing school. While information was available for most students, information on the reasons a large proportion of students left school (27.2% of Group 1 and 26.7% of Group 2) was not available. In addition, district and school staff and EOC staff have spent a great deal of time “cleaning up” the data, reconciling discrepancies and inconsistencies among the data collected. While schools obtaining the data from paper archival records were generally successful in identifying the reasons most students left school, they may not have been successful in providing data for all students. Schools providing the data from electronic databases have identified problems with the quality of the data in their systems and are taking measures to improve the quality in the future. Many of the problems with the data from electronic databases were related to data entry errors (not using appropriate coding) and to incomplete or outdated data (not updating data elements when changes to a student’s status occur).

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Table 2
All Students
High School Study of Cohorts of 9th Grade Students from Sample High Schools
Longitudinal Study of 1999-2000 and 2000-2001 Cohorts

9 th Grade Students in 1999-2000, Data Through Summer 2004 (5-year follow-up)				9 th Grade Students in 2000-2001, Data Through Summer 2004 (4-year follow-up)	
Variable	Number	Percent		Number	Percent
Total Students	2190	100%		2407	100%
Students Completing Education at Study Schools					
Total State Diplomas	1153	52.6%		1183	49.1%
Total State Certificates	25	1.1%		39	1.6%
Total GEDs Awarded*	18	0.8%		19	0.8%
Total District Special Education Certificates**	19			42	
Students Not Completing Education at Study Schools / Unknown Status					
Indicated That Continuing Education Elsewhere	317	14.5%		403	16.7%
Left School for Behavioral Reasons	45	2.1%		60	2.5%
Left School for Health/Death	LT 10	LT 0.5%		11	0.5%
Left School for Work/Military	LT 10	LT 0.5%		LT 10	LT 0.5%
Dropouts or Unknown Reasons for Leaving School	596	27.2%		642	26.7%

* GED: General Educational Development credential

** Data not reported by all schools.

Note: Cells having less than 10 (LT10) students or less than 0.5% (LT 0.5) are not reported.

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Results – High School Graduation

Table 2 lists the percentages of students in each 9th grade cohort who received diplomas from their schools within 5 or more years (1999-2000 grade 9 cohort) or within 4 years (2000-2001 grade 9 cohort). A higher percentage of students (52.6%) obtain a diploma after five years than after four (49.1%).

The reasons recorded for leaving school before completion were coded into five categories in Table 2. Approximately one in seven students (14.5%) in the 1999-2000 cohort and one in six students (16.7%) in the 2000-2001 cohort withdrew from the school indicating that the student was intending to continue his/her education in another setting. These data in most cases were not verified in the school databases (e.g., students' enrollments in other institutions were not always confirmed).

The specific reasons for leaving school among the students in the sample are listed in Table 3. The largest category, Other Unknown, includes students for whom nothing was recorded other than they either stopped attending school during the school year or did not return to the school at the end of the summer.

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Table 3
Reasons for Leaving School
High School Study of Cohorts of 9th Grade Students from Sample High Schools
Longitudinal Study of 1999-2000 and 2000-2001 Cohorts

Variable	1999-2000 9 th Grade Cohort			2000-2001 9 th Grade Cohort	
	Total	Percent		Total	Percent
Transfer Indicated to Continue Education					
Adult Education	68	3.1%		90	3.7%
Transfer In District	60	2.7%		79	3.3%
Transfer Out District	146	6.7%		193	8.0%
Home Schooling	14	0.6%		10	0.4%
Charter/Private School	LT 10	LT 0.5%		LT 10	LT 0.5%
Alternative High School	LT 10	LT 0.5%		11	0.5%
GED Program	19	0.9%		LT 10	LT 0.5%
Attend 4-yr College	LT 10	LT 0.5%		11	0.5%
Total Continuing Education	317	14.5%		403	16.7%
Leave for Behavioral Reason					
Expelled	21	1.0%		19	0.8%
DJJ	LT 10	LT 0.5%		16	0.7%
Adult Corrections	0	0.0%		LT 10	LT 0.5%
Court/Hearing	16	0.7%		23	1.0%
Total Behavior	45	2.1%		60	2.5%
Leave for Health Reason					
Health/Pregnancy	LT 10	LT 0.5%		LT 10	LT 0.5
Vocational Rehabilitation	0	0.0%		LT 10	LT 0.5
Death	LT 10	LT 0.5%		LT 10	LT 0.5
Total Health Related	LT 10	LT 0.5%		11	0.5
Leave for Work/Military					
Work	LT 10	LT 0.5%		LT 10	LT 0.5
Military	LT 10	LT 0.5%		0	0.0
Total Work/Military	LT 10	LT 0.5%		LT 10	LT 0.5
Leave with Unknown Status					
Dropout	39	1.8%		62	2.6
Withdraw Unknown	113	5.2%		154	6.4
Other Unknown	444	20.3%		426	17.7
Total Unknown	596	27.2%		642	26.7

Note: Cells having less than 10 (LT10) students or less than 0.5% (LT 0.5) are not reported.

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Tables 4 and 5 list the outcomes for students belonging to different demographic groups who completed their high school educations at the schools studied. The percentages of students repeating grade 9 who obtained diplomas are particularly low: less than one in seven students (13.7%) repeating grade 9 in the 1999-2000 cohort received a diploma, and approximately one in eight students in the 2000-2001 cohort received diplomas (12.0%). Almost one in four students who had a disability received diplomas (23.3% in the 1999-2000 cohort and 24.6% in the 2000-2001 cohort). Males fared less well in earning diplomas than females, and African American students fared less well than White students, with less than 40% of African American students in the 2000-2001 9th grade cohort receiving diplomas.

Table 4
High School Completion by Demographic Groups in 1999-2000 9th Grade Cohort
Study of Cohorts of 9th Grade Students from Sample High Schools
Longitudinal Study of 1999-2000 and 2000-2001 Cohorts

Student Group	Total in Group	Total Diplomas	% Diplomas	Total Certificates	% Certificates	Total GEDs	% GEDs
Repeating Grade 9 in 1999-2000	439	60	13.7%	LT 10	LT 2.0%	LT 10	LT 2.0%
Having an IEP for Disabilities	326	76	23.3%	32*	9.8%*	LT 10	LT 0.5%
Female Students	1041	616	59.2%	11	1.1%	LT 10	LT 0.5%
Male Students	1104	537	48.6%	14	1.3%	11	1.0%
African American Students	655	298	45.5%	13	2.0%	LT 10	LT 0.5%
White Students	1490	834	56.0%	12	0.8%	17	1.1%

* Includes State attendance certificates and district special education certificates.

Note: Cells having less than 10 (LT10) students are not reported.

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Table 5
High School Completion by Demographic Groups in 2000-2001 9th Grade Cohort
Study of Cohorts of 9th Grade Students from Sample High Schools
Longitudinal Study of 1999-2000 and 2000-2001 Cohorts

Student Group	Total in Group	Total Diplomas	% Diplomas	Total Certificates	% Certificates	Total GEDs	% GEDs
Repeating Grade 9 in 2000-2001	449	54	12.0%	LT 10	LT 2.5%	LT 10	LT 2.0%
Having an IEP for Disabilities	431	106	24.6%	65*	15.1%*	LT 10	LT 0.5%
Female Students	1145	640	55.9%	15	1.3%	12	1.0%
Male Students	1262	543	43.0%	24	1.9%	LT 10	LT 1.0%
African American Students	781	305	39.1%	22	2.8%	LT 10	LT 0.5%
White Students	1607	853	53.1%	21	1.3%	16	1.0%

* Includes State attendance certificates and district special education certificates.

Note: Cells having less than 10 (LT10) students are not reported.

Issues and Further Questions

There are inherent limitations to retrospective studies such as this one which require collecting old data from data systems not specifically designed to provide longitudinal data: data may have been entered to serve a specific purpose in the past and may not be in the format needed for the new study, and data needed for the new study may not have been viewed as having a critical use in the past and thus little effort may have been made to ensure its accuracy and completeness. However, it is apparent from this study that the electronic school data systems in current use are adequate to collect and monitor data on the progress of students toward graduation if the quality of the data stored in the system can be improved. Several issues raised by this study regarding the improvement of data quality were identified by the Data Quality Advisory Committee:

- There is a critical need for better training and support for the school staff employed to enter data and maintain the data system.
- Needed support for school data staff includes clearer and more detailed information on what data elements are required or essential, acceptable ranges of values for those data elements, and how the data elements in the school databases are used for accountability purposes.
- There is a need to evaluate the working conditions and compensation for school data specialists.

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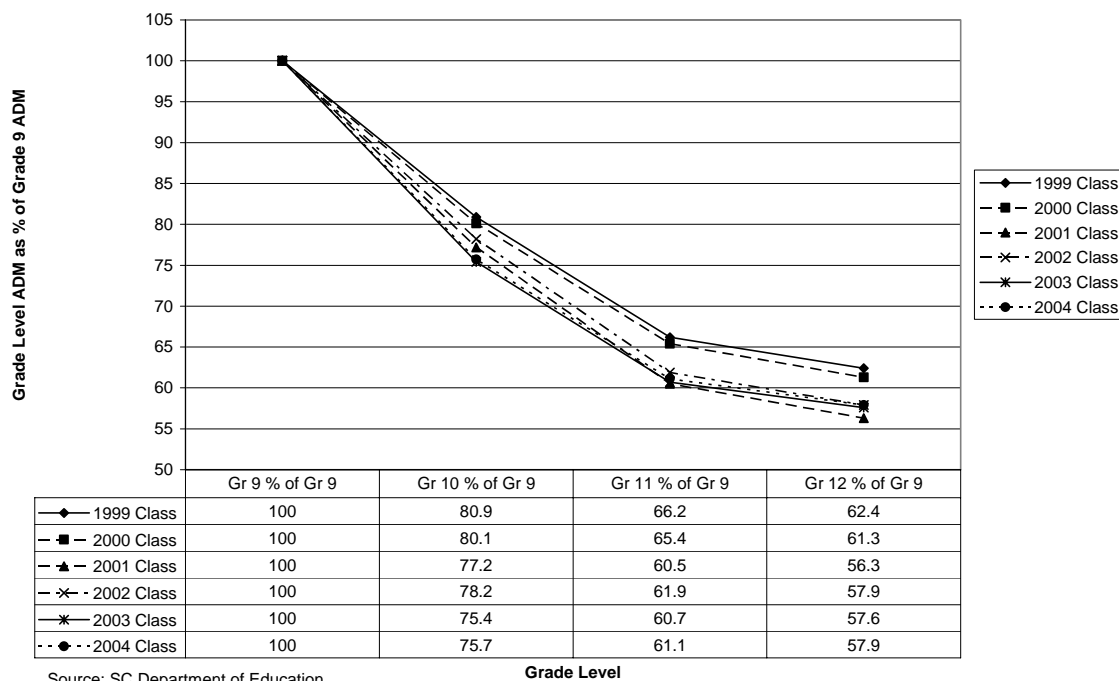
Questions for further study

- What policy and procedural changes are needed to improve the quality of the data collected for the accountability system?
- What is the relationship between the findings of this study and the report card graduation rates reported for these schools, and what implications does the study have for the calculation and reporting of high school graduation rates?
- What can we learn from these data about students who prematurely leave school, especially the data on attendance and Carnegie units earned?

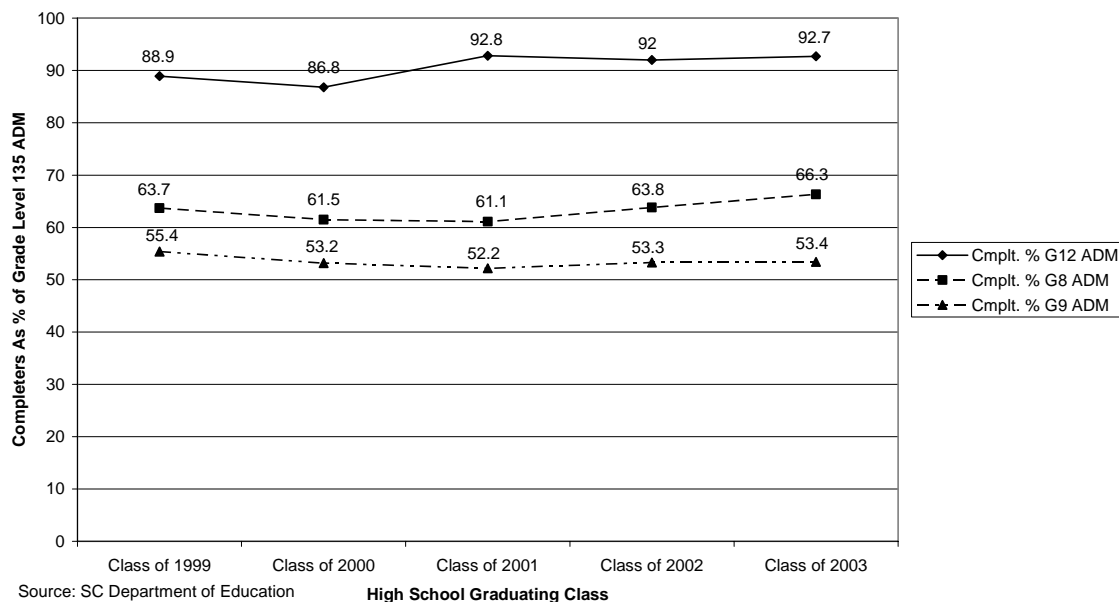
EOC staff will continue analysis of these data and will work with the Data Quality Advisory Committee, the SDE, and school districts to address these questions.

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FIGURE 1: Grade Level Enrollments As % of Grade 9 Enrollment, Classes 1999-2004



**FIGURE 2:
High School Completers (Students Receiving State Diplomas and State Certificates; Does Not
Include Diplomas Awarded To Adult Education Students)
1999-2003 As Percent of Grade Level Enrollments**



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APPENDIX

Data Quality Advisory Committee:

Dr. Min Ching
Richland School District One

Dr. Teri Siskind
Office of Assessment, SCDE

Dr. Glen Carson
Spartanburg School District Four

Dr. Janet Rose Beale
Charleston County School District

Dr. Lee D'Andrea
Anderson School District Four

Mr. Tom Pritchard
Horry County School District

Dr. David Burnett
Office of Research, SCDE

Ms. Shawn Larrymore
Office of Research, SCDE

Ms. Missy Wall-Mitchell
Lexington School District Five

Dr. Gregg Bibb
Oconee County School District

Dr. Cleo Richardson
Marion School District One

EOC Staff

Dr. Jo Anne Anderson

Mr. David Potter